MCOG Application Note 3:
Requirement 1-of-1 Applied to AI-Driven SDN and Autonomous Network Systems
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1. Purpose

This Application Note demonstrates how the Moral Covenant of Governance (MCOG) Requirement 1-of-1 can be applied to AI-driven Software-Defined Networking (SDN), orchestration platforms, and autonomous network systems while preserving the framework's technology-agnostic nature.

2. Requirement 1-of-1 Recap

Any governance system must maintain full compliance with the three universal moral pillars — Adherence to the Golden Rule/Reciprocity, Protection of the Commons/Stewardship, and Securing of Unalienable Rights — as the necessary and sufficient condition for a sustained Virtuous Cycle of Liberty. This is achieved through the operationalization of the pillars via a modest body of derivative rules.

3. Mapping the Three Pillars to Network Control Systems

- **Golden Rule / Reciprocity**: Network policies and AI orchestration decisions should treat user traffic, services, and data flows in ways operators would accept if roles were reversed.
- **Protection of the Commons / Stewardship**: Shared resources (bandwidth, spectrum, routing infrastructure, trust) must be allocated fairly and sustainably across users and generations.
- **Securing of Unalienable Rights**: Systems must preserve user agency, privacy, consent, and the ability to opt out or override automated decisions.

4. Functional Interface for SDN/AI Orchestration

The network control system should provide the Three-Pillar Compliance Filter with:

- Policy or optimization objectives
- Relevant telemetry and state data
- Proposed configuration changes or autonomous actions

The Filter returns:

- Compliance decision (Permit / Deny / Modify)
- ROLIS/ROTIS (tyrannical & liberating intensity) impact assessment
- Recommended adjustments

This interface can be implemented as a lightweight middleware layer or policy wrapper with minimal performance overhead.

5. Examples

Traffic Shaping Policy An AI controller proposes de-prioritizing certain flows to optimize throughput. **Filter Outcome**: Partial violation of Pillar 1 and Pillar 3. Recommendation: Add transparent user-configurable opt-out mechanisms.

Autonomous Spectrum Allocation AI orchestration dynamically reallocates spectrum during congestion. **Filter Outcome**: Compliant when fair across users/generations (Pillar 2) and preserves user agency (Pillar 3).

6. Benefits and Implementation Guidance

Using Requirement 1-of-1 creates an auditable “moral firewall,” enables early detection of ethical drift, and builds end-user confidence. Organizations can start with lightweight policy wrappers and evolve toward real-time integration as maturity grows.

Future Work: Prototype implementations in open-source platforms (e.g., ONOS, Ryu) and empirical validation in testbeds.

Document Availability

The full technical specification, logic proofs, and structural taxonomies are published under Creative Commons licensing as a public-domain Request for Comments (RFC).

- ***Open Standard for the Identification and Prevention of Tyrannical Governance: The Moral Covenant of Governance (MCOG) — Requirement 1-of-1, May 2026; Free download:*** *https://archive.org/details/open-standard-mcog-req-1-of-1-v-01*
- ***Addendum A: The Three-Pillar Compliance Filter — Functional Specification and Examples, to Open Standard for the Identification and Prevention of Tyrannical Governance: The Moral Covenant of Governance (MCOG) — Requirement 1-of-1, July 2026; Free Downloads:*** *https://archive.org/details/open-standard-mcog-req-1-of-1-addendum-a-v-01*
- **The full MCOG body of work, including all application notes, are available for Free Downloads here:** https://archive.org/details/@michael_fargano/uploads
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"Power without moral anchors eventually corrupts. Requirement 1-of-1 is that anchor."